

**Abstract**

A receiver for ultra-wideband communications is provided. One feature of the receiver architecture is that includes only a single correlator. The receiver may be used in wireless and wire communication mediums. The single correlator may be used to update a locally generated signal based on an incoming signal and detect data. Another embodiment receiver may be used in a multi-path environment. This Abstract is provided for the sole purpose of complying with the Abstract requirement rules that allow a reader to quickly ascertain the subject matter of the disclosure contained herein. This Abstract is submitted with the explicit understanding that it will not be used to interpret or to limit the scope or the meaning of the claims.

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